

<b>Biosolids Projects Update</b> <b>6-Apr-06</b> <b>Status of 68 FR 75531 projects</b>		
<b>Project No.</b>	<b>Project Title</b>	<b>Status / Comments</b>
1	Biennial Review Under CWA Section 405(d)(2)(C)	EPA published in December 2003 (68 FR 75531) the results of its most recent biennial review (Biennial Review Cycle 2003). From a multi-pathway exposure and hazard screening exercise, EPA identified 15 pollutants as having a potential hazard to either humans or the environment following use or disposal of sewage sludge. The list of 15 pollutants has been reduced to 9 as follows: barium, beryllium, 4-chloroaniline, fluoranthene, manganese, nitrate, nitrite, pyrene, and silver. EPA continues to evaluate these 9 pollutants together with several organic chemicals and will soon be conducting a targeted national survey of these pollutants and others of potential concern (see project 5 below). The data from the survey will be used to conduct an exposure and risk assessment, using the updated pollutant concentrations, to determine if any of them warrant regulating in part 503. Meanwhile, EPA commenced activities related to satisfying Clean Water Act Section 405(d)(2)(C) biennial review requirements for Biennial Review Cycle 2005. EPA is summarizing the results and is scheduled to post the results of this review on the biosolids website early to mid 2006.
2	Compliance Assistance and Enforcement Actions	EPA continues to actively address biosolids violations and require the proper land-application of biosolids to prevent risk to human health or environment. EPA Regions and the States have the responsibility to address situations where compliance monitoring, compliance assistance enforcement actions to address biosolids violations are appropriate and necessary. If additional requirements are put in place to address additional environmental risks to human health and the environment, EPA will re-evaluate whether there is a need to increase compliance and enforcement resources allocated to the biosolids program. Meanwhile, EPA (Office of Enforcement and Compliance Assurance) has developed a new look for its home page, where a new badge button now invites the public to report possible environmental violations or crimes. OECA will also be working to improve current processes for routing and tracking citizen tips and enhancing efforts to inform the public about possible environmental violations. For example, the following website makes it possible for the public to be a part of EPA's work <a href="http://www.epa.gov/compliance">www.epa.gov/compliance</a>
3	Methods Development, Optimization, and Validation for Microbial Pollutants in Sewage Sludge	
3a	Optimization of the Methods for Detecting, Enumerating, and Determining the Viability of Helminth / Ascaris Ova in Sewage Sludge	EPA / ORD is hoping to provide appropriate funding needed to complete the Helminth ova method. EPA's Office of Water will multi-lab validate the method when available.
3b	Improved Methods for Detecting Viruses in Sewage Sludge	This work has been contracted with the University of Cincinnati. Studies are under way. EPA's Office of Water will multi-lab validate the method when available.
3c	Development and Validation of Analytical Methods for Fecal Coliform in Sewage Sludge	<b>Joint Office of Research and Development and Office of Water effort completed</b> Report # 821-B-04-007 was published in September 2005. EPA is promulgating this as a proposed method for 40 CFR Part 136. The first draft final rule, with Part 503 and Part 136 connector language, is due mid 2006.
3d	Development and Validation of Analytical Methods for Salmonella in Sewage Sludge	<b>Joint Office of Research and Development and Office of Water effort completed</b> Report # 821-B-04-008 was published in September 2005. EPA is promulgating this as a proposed method for 40 CFR Part 136. The first draft final rule, with 503-136 connector language, is due mid 2006.
3e	Microbial organisms	EPA / OST is planning a new biosolids holding time study for FY'06.
4	Field Studies of Application of Treated Sewage Sludge	The Charlotte, NC field study was completed and the Office of Research and Development have finished the follow-up time series sampling. Smaller-scale research may be conducted at other locations, or small-scale testing may occur on-site. The results may help inform techniques and methods for further research. A conference call was held with a stakeholder group in December 2005 to provide an study update.
5	Targeted National Analytical Sewage Sludge Survey	Completed the draft sewage sludge survey design in February 2005, and peer review of the design in March 2005. We are incorporating peer review comments into the design and preparing responses to peer review comments. EPA is examining what additional analytes to include in the survey (e.g., PPCPs, PBDEs) based on availability of analytical methods and costs. Sampling at 89 facilities, data analyses, and report writing will extend well into FY'06 and possibly beyond.

6	Participate in Incident Tracking Workshop	EPA attended the first WERF-sponsored incident-tracking workshop held at WERF's facility in VA, January 10-11, 2005. The "seed Committee" organizing the Workshop identified the "PSC Nominating Committee" that then selected the members of the final PSC. Ten individuals were selected for the PSC. The PSC issued a Request For Proposal July 25, 2005 for investigating alleged incidents related to biosolids exposure. The deadline for responding to the RFP was October 3, 2005. Research Funding proposals are currently being reviewed.
7	Conduct Exposure Measurement Workshop	A workshop was held in Cincinnati in March 2006. Attendees of the workshop proposed a list of research projects aimed at addressing exposure following land-applied biosolids (e.g., bioaerosolization after biosolids have dried).
8	Assess the Quality and Utility of Data, Tools and Methodologies to Conduct Microbial Risk Assessments on Pathogens	A preliminary conceptual model and problem formulation was drafted and circulated to EPA staff for comment Sept 05. Comments have been received and are being incorporated into an external review document. The final product will include an evaluation of human health endpoints relevant to land applied biosolids along with associated conceptual models and a discussion of necessary data and assessment tools. The final deliverable is expected for CY06. Comments on the internal review draft have been received and are being incorporated. The next step is external review (date not specified by ORD).
9	Support Pathogen Equivalency Committee	The PEC is in the process of developing a more formal approach for evaluating equivalent treatments. The new approach, with its QA requirements, will be posted on the Science Advisory Board's webpage. ORD is working on improving the website so PEC applicants can easily submit requests online using a consistent format, and that should help expedite reviews. A PEC retreat and workshop was held in September 2005.
10	Development and Application of Analytical Methods for Detecting Pharmaceutical and Personal Care Products in Sewage Sludge	A Los Angeles facility sent ORD Class A biosolids for use in methods development. Work continues on improving the separation conditions and evaluating the recoveries for the macrolide antibiotics. Methods are also being developed for semivolatiles and nonvolatiles in biosolids including PPCPs, EDCs, and other components discovered during the research. A tentative method for estrogens (e.g., estradiol, ethynylestradiol, estrone) developed for other matrices is planned to eventually be evaluated for biosolids. Also working on developing methods for detecting synthetic musk fragrance compounds in land-applied biosolids. ORD reports that methods development for pharmaceuticals and personal care products in Class A biosolids is on schedule. The synthetic musk compounds aspect of the method development is now receiving finishing touches. A peer review journal article is in order and will be sent out for publication by November 2005. Work on pharmaceuticals aspect of biosolids method development is currently on method recovery, and great progress is being made.  NERL indicated that they hope to have macrolide, fluoroquinolone and musk single lab validation in Class A completed by end July 2006.
11	Publish the Proceedings of USEPA-USDA Workshop on Emerging Infectious Disease Agents and Issues Associated with Animal Manures, Biosolids, and Other Similar By-Products	<b>Completed.</b> A special issue of Compost Science & Utilization was printed; distribution of the paper started at the Water Environment Federation's Specialty Conference on Biosolids, April 17-21, 2005 in Nashville, TN.
12	Support "Sustainable Land Application Conference"	<b>Completed.</b> Peer reviewed papers from the conference, held during the first week of Jan'2004 in Orlando, FL., were published in the Jan/Feb.'2005 issue of the Journal of Environmental Quality. The complete proceedings are currently available on the web at <a href="http://jeq.scijournals.org">http://jeq.scijournals.org</a> .
13	Review Criteria for Molybdenum in Land-applied Treated Sewage Sludge	EPA intends to assess the need and appropriate level for a numerical standard for molybdenum in sewage sludge using the 2000 workshop results, conclusions from O'Connor et al. 2001, and additional data developed since 2000, including results from the 2005 targeted national sewage sludge survey. EPA expects to complete this assessment in 2007.
14	Improve Stakeholder Involvement and Risk Communication	EPA is updating and modernizing its biosolids web site. When updated, readers and visitors may find the site easier to navigate, and information should be available and easier to find. EPA continues to assess how to include stakeholders at various stages of policy development. One outreach project may include a brochure for communicating how EPA conducts exposure and hazard assessment for pollutants in sewage sludge. EPA is pleased to announce a new Public Involvement webpage at <a href="http://www.epa.gov/stakeholders/index.htm">www.epa.gov/stakeholders/index.htm</a> . Public involvement refers to the full range of activities that EPA uses to engage the American people in the Agency's decision-making process. EPA is also pleased to announce the launch of a new government web site <a href="http://ExpectMore.gov">ExpectMore.gov</a> . We are responsible for being both good stewards of our nation's environment and good stewards of our nation's tax dollars and this site will help share our programs' results with the nation.

Rick Stevens, Biosolids Coordinator, Health and Ecological Criteria Division, Office of Science and Technology, Office of Water  
U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, 4304T, Washington, DC 20460  
202-566-1135; 202-566-1139 fax